

DRUM SCRUBBER

Abstract:

The invention creates a new type of scrubbers: drum scrubber. In the drum scrubber, processed gas passes through a wet fiber filter, but unlike previously invented fiber-bed scrubber, the fiber is constantly cleaned. The cleaning is achieved by using filter material as a surface of the rotating drum, partially immersed in a liquid.

While periodic immersion of filter fiber in liquid might achieve appropriate particle removal for some applications, better cleaning is provided by creating a reverse flow of liquid through the filter material. In addition, filter material could be sprayed with liquid from either within the drum or from outside of the drum, or both. Also, ultrasound could be used to release particles trapped within fibers while fibers are immersed in the liquid.

This solves the plugging problem normally associated with wet filter and allows its use in most applications, including applications with a high dust load.